

NI-4000 netlinx® integrated controller



SUPERIOR FUNCTIONALITY

The NI-4000 is geared to meet the high-end control and automation requirements within the most sophisticated and complex commercial and residential installations. This solution is engineered with the same number of ports and relays as the NI-3000, plus four NetLinx Control Card slots in order to achieve a superior level of built-in control and automation functionality. The NI-4000 integrates the largest amount of electronics such as VCR and DVD players, projectors, projection screens, lights, HVAC systems, security cameras and more. In technology intensive environments, this solution can be used to anticipate the future addition of devices and control capabilities. For businesses experiencing rapid growth and homes looking for greater flexibility and customizations, the NI-4000 includes the perfect "mix" of compatible control formats:

- 8 – IR Ports
- 8 – I/O
- 8 – Relays
- 7 – RS-232 / RS-422 / RS-485 Serial Ports
- 4 – NetLinx Control Card slots

FURTHER UPGRADES

A staple of AMX control technology, the NI series of products offers the flexibility to upgrade current Axcen3 Control Systems to leading NetLinx Control System architecture. Supporting all NetLinx applications and AMX Touch Panels, the NI series of products enables the convergence toward a unified AMX Control System platform.



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NI-4000 (FG 2105)

TECHNICAL SPECS

Power requirements: 900 mA @ 12 VDC. Additional power required for each NXC card that is inserted. See NXC card specification for individual card requirements.

Memory: 65 MB

Dimensions: 5.21" x 17" x 9.31"
(13.23 cm x 43.18 cm x 23.65 cm)

Weight: 9.15 lbs. (4.15 kg)

Enclosure: Metal with black matte finish

ONBOARD MASTER

- Incorporates the functionality of the ME260 NetLinx Master.
- Processing Power:
 - 32-bit microprocessor
 - Real-time operating system
- Memory:
 - Volatile – 32 MB
 - Non-Volatile – 1 MB
 - Compact Flash – 32 MB
 - Compact Flash upgradeable to 1 GB.
- Triple Bus Networking:
 - ICSNet – Category 5 network (600 kbps) connects up to 32,000 NetLinx devices, operates over 1000 feet of wiring for each ICSNet port, supplies 12 VDC power for ICSNet devices.
 - Axlink – 4-wire network (20.8 kbps) connects up to 255 Axxess devices, operates up to 3,000 feet of wiring and supplies 12 VDC power.
 - Ethernet – Direct 10/100 BaseT Ethernet networking. Ethernet Protocols used by NI-4000:
 - ICSP – peer to peer protocol used for both master-to-master and master-to-device communications.
 - ICMP – To connect over a network, ping a NI-4000.
 - Telnet – NetLinx telnet server provides a mechanism to configure and diagnose a NetLinx system.
 - HTTP – NI-4000 has a built-in web server that complies with the HTTP 1.0 specification and supports all of the required features of HTTP v1.1.
 - FTP – NI-4000 has a built-in FTP server that conforms to RFC959.
 - integration! Solutions – integration! Solutions feature uses port 10500 for the XML based communication protocol.
- Expansion Card Slots:
 - Accepts up to four (4) Netlinx Control Cards.

ON-BOARD NI-4000 CONTROL FUNCTIONS PROVIDES VERSATILE, MULTIPORT CONTROL

- Seven Serial data ports (RS232/422/485) control, with XON/XOFF and CTS/RTS, 300-115,200 baud.
- Eight IR/Serial ports for control of up to 1.142 Mhz carrier frequency.
- Eight I/O channels for closure, 0-5 vdc voltage sensing, or interactive power sensing for IR ports.
- Eight Relays - single-pole single throw relay ports, independently controlled.
- STS, Serial to Screw Terminal (FG959)
- NCK, NetLinx Connector Kit (FG2902)
- 2-pin, 3.5mm Black Male Phoenix Connector (41-5021)

FRONT PANEL COMPONENTS

LED INDICATORS

- LNK/ACT: Green LED lights when the Ethernet cables are connected and terminated correctly and blinks when receiving Ethernet data packets.
- Status: Green LED blinks to indicate that the system is programmed and communicating properly.
- Output: Red LED blinks when the Master transmits data, sets channels on and off, sends data strings, etc.
- Input: Yellow LED blinks when the Master receives data from button pushes, strings, commands, channel levels, etc.

RS-232/422/485 LEDs

- Seven sets of red and yellow LEDs light to indicate Ports 1-7 are transmitting or receiving RS-232, 422, or 485 data:
 - TX LEDs (red) blink when transmitting data.
 - RX LEDs (yellow) blink when receiving data.
 - LED activity reflects transmission and reception activity
- Relay LEDs
- Eight red LEDs light to indicate relay channels 1-8 are active (closed) on Port 8.

IR/SERIAL LEDs

- Eight red LEDs light to indicate IR/Serial channels 1-8 are transmitting control data on Ports 9-16.
- LED indicator for each IR port remains lit for the length of time that IR/Serial data is being generated.

I/O LEDs

- Eight yellow LEDs light when the I/O channels 1-8 are active on Port 17.

REAR PANEL COMPONENTS

Power Connector: 2-pin (male) green captive-wire connector for 12 VDC power supply.

Ethernet 10/100 Port: RJ-45 Ethernet 10/100 connector.

Automatically negotiates connection speed and whether to use half or full duplex mode.

ICSNet: Two RJ-45 connectors for ICSNet interface that provides 12 VDC @ 500 mA and data to external ICSNet devices.

ICSHub Out: RJ-45 connector that provides data to a Hub.

Axlink Connector: Black 4-pin (male) captive-wire connector that provides data and power to external control devices (6 A max power rating).

Program Port: DB-9 (male) connector that supports RS-232 communications to a PC for system programming and diagnostics.

Configuration DIP Sw: 8-position DIP switch for setting the baud rate for Program Port. Baud rate settings are: 9600, 38,400 (default), 57,600, and 115,200 bps.

ID Button: Pushbutton sets device address ID (in conjunction with NetLinx Studio v1.2 build 200 or higher software program).

RS-232/422/485:(Ports 1-7)

Seven RS-232/422/485 control ports using DB-9 (male) connectors with XON/XOFF (transmit on/transmit off), CTS/RTS (clear to send/ready to send), and 300-115,200 baud.

RELAY (PORT 8)

- 8-channel single-pole single throw relay ports
- Each relay is independently controlled
- Supports up to 8 independent external relay devices.
- Each relay can switch up to 24 VDC or 28 VAC @ 1 A.
- Two 8-pin mini-Phoenix connectors (3.5 mm) provide relay termination

DIGITAL I/O (PORT 17)

- 8-channel binary I/O port for contact closure
- Each input is capable of 0-5 VDC voltage sensing. Input format is software selectable
- One 10-pin mini-Phoenix connector (3.5 mm) provide I/O port termination

IR/SERIAL (PORTS 9-16)

- Eight IR/Serial control ports support high-frequency carriers up to 1.142 MHz.
- Each output is capable of two electrical formats: IR or Serial
- Eight IR/Serial data signals can be generated simultaneously
- Two 8-pin mini-Phoenix connectors (3.5 mm) provide IR/Serial port termination

EXPANSION CARD SLOTS

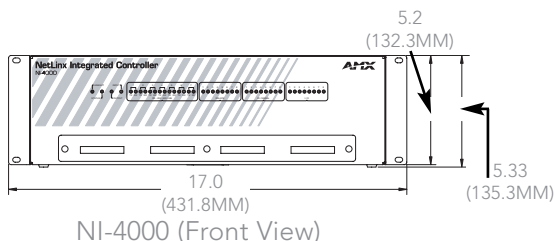
- Accepts up to four (4) Netlinx Control Cards.
- Available cards are: NXC-COM2, NXC-I/O, NXC-IRS4, NXC-REL10, NXC-VAI4, NXC-VOL4.

INCLUDED ITEMS

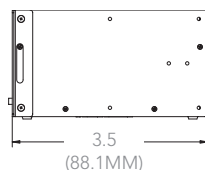
- Removable rack ears. Allows for tabletop, under-counter, and front/rear rack mounting.
- Two 8-pin mini-Phoenix female connectors (41-5083)
- One 10-pin mini-Phoenix female connector (41-5107)
- Two CC-NIRC IR Emitters (FG10-000-11)
- One 4-pin 3.5 mm mini-Phoenix Axlink connector (41-5047)
- One 2-pin mini-Phoenix PWR connector (41-5025)
- One Relay Terminal Common Strip (41-2105-01)
- Four Rack mount screws (80-0186)
- Four washers (80-0342)

OPTIONS

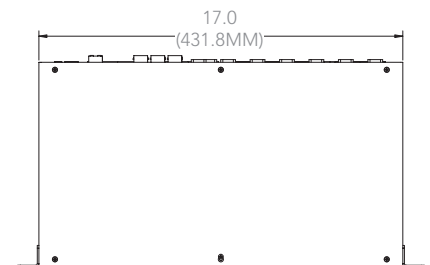
- PSN6.5 - 12 VDC Power Supply (FG-423-41)
- CSB Cable Support Bracket (FG517)
- CC-N232 RS232/422 Cables
- CC-NIRC IR Cables (FG10-000-11)
- CC-NREL Relay Cables
- CC-NSER IR/Serial Cables
- NXC Control Cards for expansion slots
- Upgrade Compact Flash (factory programmed with firmware):
 - NXA-CFNI64M - 64 MB flash upgrade for NI-2000, NI-3000 & NI-4000 (FG2116-31)
 - NXA-CFNI128M - 128 MB flash upgrade for NI-2000, NI-3000 & NI-4000 (FG2116-32)
 - NXA-CFNI256M - 256 MB flash upgrade for NI-2000, NI-3000 & NI-4000 (FG2116-33)
 - NXA-CFNI512M - 512 MB flash upgrade for NI-2000, NI-3000 & NI-4000 (FG2116-34)
 - NXA-CFNI1G - 1 GB flash upgrade for NI-2000, NI-3000 & NI-4000 (FG2116-35)zz



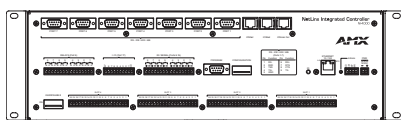
NI-4000 (Front View)



NI-4000
(Right Side)



NI-4000 (Top View)



NI-4000 (Rear View)



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